THAT WHICH IS CLAIMED IS:

1. A method of detecting lighting flicker in the output of a video imaging device, the video imaging device having a main picture area divided into pixels and producing successive images at a frame rate; the method comprising producing a series of signals from an additional picture area adjacent said main picture area, the additional picture area having a size substantially larger than a pixel, each of said signals being a function of light incident on the additional picture area in a time period substantially shorter than that of the frame rate; accumulating predetermined numbers of said signals to form a series of compound samples; and filtering the compound samples to detect components indicative of flicker.

2. The method of Claim 1, in which said time period is equivalent to the line rate of the main picture area.

3. The method of Claim 1 or 2, in which said signals are derived from a plurality of additional picture areas.

4. The method of any preceding claim, in which said filtering is effected by a bandpass filter tuned to the nominal frequency of the flicker.

5. The method of any of Claims 1 to 3, in which said compound samples are formed at a sample rate which is a multiple of the nominal flicker frequency,

and said filtering is effected by taking the fundamental output component of a radix-N butterfly.

6. The method of Claim 5, in which N is 3 or 4.

7. The method of Claim 5 or Claim 6, in which said fundamental output component represents instantaneous complex flicker energy E, and in which E is averaged over time to produce a longer-term estimate E' of flicker energy.

8. The method of Claim 7, in which E' is produced according to the relationship

$$E' = E\mu + E' (1 - \mu)$$

where μ is a time constant.

9. The method of Claim 7 or Claim 8, further comprising deriving the modulus of E' and comparing this with a predetermined threshold T to give a final estimation of flicker being present if $|E'| > T$.

10. A method of ameliorating lighting flicker in the output of a video imaging device; the method comprising detecting flicker by the method of any preceding claim and, during any time when flicker is detected, operating the main picture area of the imaging device at an exposure setting selected to eliminate or minimize flicker.

11. The method of Claim 10, in which said exposure setting comprises an exposure period which is the inverse of the flicker frequency or a harmonic thereof.

12. A flicker-detecting video camera comprising a video imaging device having a main picture area divided into pixels and producing successive images at a frame rate, and at least one additional picture area adjacent said main picture area and having a size substantially larger than a pixel, the additional picture area or areas being arranged to produce a series of signals each of which is a function of light incident on the additional picture area(s) in a time period substantially shorter than that of the frame rate; means for accumulating predetermined numbers of said signals to form a series of compound samples; and filter means for filtering the compound samples to detect components indicative of flicker.

13. The video camera of Claim 12, in which the or each additional picture area is a strip down one side of the main picture area.

14. The video camera of Claim 13, in which the or each additional picture area is formed by connecting a column of pixels in common.

15. The video camera of any of Claims 12 to 14, including gain control means for the additional picture area(s) independent of the gain control of the main picture area.

16. The video camera of any of Claims 12 to 15, which the filter means comprises a radix-N butterfly.

17. The video camera of Claim 16, further including an averaging circuit connected to the output of the radix-N butterfly.

18. The video camera of Claim 17, in which the averaging circuit is a first-order autoregressive filter.

19. The video camera of any of Claims 12 to 18, including an automatic exposure control circuit, a second exposure control circuit setting an exposure period which is the inverse of a known or anticipated flicker frequency or a harmonic thereof, and control means connecting the automatic exposure control circuit or the second exposure control circuit selectively to control exposure of the main picture area in dependence on the output of said filter means.